

REMARKS:

This is intended as a full and complete response to the Office Action dated December 23, 2003, having a shortened statutory period for response set to expire on March 23, 2004. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1, 6, and 11-17 remain pending in the application upon entry of this response. Claims 2-5 and 7-10 have been cancelled by the Applicants. Claims 1 and 6 have been amended and claims 11-17 have been added. Reconsideration of the rejected claims is requested for reasons presented below.

Claims 1-6 stand rejected under 35 USC § 112 as being indefinite for failing to point out and distinctly claim the subject matter which the applicant regards as the invention. The Examiner states that the word "predetermined" is indefinite. Applicants have amended claim 1 to remove the word "predetermined". Applicants respectfully request withdrawal of the rejection.

Claims 1 and 6 stand rejected under 35 USC § 102(e) as being unpatentable over Charneski, *et al.*, United States Patent No. 6,645,860, (herein *Charneski*), on grounds that *Charneski* shows the claimed method of CVD copper metallization in IC applications where a precursor is deposited on a semiconductor substrate and heated to cause a pyrolytic decomposition reaction. Applicants respectfully traverse the rejection.

Charneski discloses a two-step CVD process involving the first step using the copper precursor (hfac)Cu(DMCOD) and the second step using a second copper precursor other than (hfac)Cu(DMCOD). Each step *Charneski* discloses is a traditional CVD process of forming a metal-organic vapor and introducing the vapor to the process chamber. *Charneski* does not teach, show or suggest a film deposition method comprising a first step of preparing a fluid that has organic metal as a main component which precipitates a film deposition material using pyrolytic decomposition, wherein the fluid comprises an aliphatic saturated hydrocarbon solvent and the organic metal is a copper diketonate, a second step of applying the fluid onto a to-be-processed body at a temperature within the non-reactive range of the organic metal, and a third step of

heating the to-be-processed body to a second temperature, and causing a pyrolytic decomposition reaction of the organic metal throughout the fluid that is applied onto the to-be-processed body to occur to form a copper film on the to-be-processed body, as recited in claim 1 and claim 6 which depends thereon. Applicants respectfully request withdrawal of the rejection.

Claim 1 stands rejected under 35 USC § 102(e) as being unpatentable over Lopatin, *et al.*, United States Patent No. 6,368,954, (herein *Lopatin*), on grounds that *Lopatin* shows the claimed method of ALD copper metallization where a precursor is deposited on a semiconductor substrate and heated. Applicants respectfully traverse the rejection.

Lopatin is an inappropriate reference under 35 USC § 102(e) since *Lopatin* was filed after the present invention. *Lopatin* has the priority date July 28, 2000, while the present application is the United States national phase of PCT/JP99/06032, filed October 29, 1999, that claims priority to JP 1998-308654, filed October 29, 1998. Applicants respectfully request withdrawal of the rejection.

New claims 11 and 13 also recite subject matter that is not taught or suggested by *Charneski*. Consideration of claims 11 and 13, and claims 12 and 14-17 which are dependent thereon, is respectively requested.

In conclusion, the references cited by the Examiner, alone or in combination, do not teach, show, or suggest the invention as claimed.

Having addressed all issues set out in the office action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



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